

HellerEhrman
ATTORNEYS

1666 K Street, NW, Suite 300
Washington, D.C. 20006-1228
Main (202) 912-2000
Fax (202) 912-2020

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To: Karen A. Canella, USPTO
Telephone: (571) 272-0828

Fax: (703) 872-9306

From: Patricia D. Granados
Telephone: (202) 912-2702
Direct Fax: (202) 912-2020

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No. of Pages: 8 (including cover)
Date: September 27, 2004

RE: 24741-1529 (Serial No. 09/890,649)

Message: Karen, Further to my voicemail of 9/27/04, please find a list of proposed claim amendments for this application. A response to the Office Action of 7/1/04 is due 10/1/04. The client would like to know if you think that the claims, as amended, are appropriate, or if a Declaration would help advance prosecution. If you think that an in-person interview would help, I would be available to meet with you this week to discuss the claims. A response is requested as soon as possible. Thank you.

Claims 1-35. (canceled).

Claim 36. (currently amended) A method for ~~separating tumor cells~~ simultaneously enriching tumor cells and depleting unwanted blood cells from a body fluid, comprising (a) centrifuging in a centrifugation vessel a cell separation medium overlaid with [[a]] said body fluid, wherein [[the]] said cell separation medium has a density in the range of from 1.055 to 1.065 g/ml, and wherein said centrifugation vessel is divided into an upper compartment and a lower compartment, and

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Heller Ehrman White & McAuliffe LLP www.hewm.com

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(b) introducing said cell separation medium into said lower compartment and said body fluid into said upper compartment, wherein said upper and lower compartments are divided by a porous barrier, filter, sieve, or flap.

Claim 37. (currently amended) The method ~~as claimed in~~ of claim 36, wherein ~~[[the]]~~ said cell separation medium has a density in the range of from 1.059 to 1.062 g/ml.

Claim 38. (currently amended) The method ~~as claimed in~~ of claim 36, wherein ~~[[the]]~~ said cell separation medium has a density of about 1.060 g/ml.

Claim 39. (currently amended) The method ~~as claimed in~~ of claim 36, wherein said centrifuging is carried out at about 500 to 2000 x g for about 10 to 30 minutes.

Claim 40. (currently amended) The method ~~as claimed in~~ of claim 36, wherein said centrifuging is carried out at about 1000 x g for about 20 to 30 minutes.

Claim 41. (currently amended) The method ~~as claimed in~~ of claim 36, wherein ~~[[the]]~~ said cell separation medium is selected from the group consisting of ~~Percoll~~ PERCOLL™ and ~~Ficoll~~ FICOLL™.

Claim 42. (currently amended) The method ~~as claimed in~~ of claim 36, wherein said body fluid comprises one or more substances which prevent aggregation of platelets onto tumor cells.

Claim 43. (currently amended) The method ~~as claimed in~~ of claim 36, wherein ~~[[the]]~~ said body fluid has been treated to remove substances which promote aggregation of platelets onto tumor cells.

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Claim 44. (currently amended) The method ~~as claimed in~~ of claim 36, wherein ~~[[the]]~~ said body fluid is peripheral blood.

Claim 45. (currently amended) The method ~~as claimed in~~ of claim 36, wherein ~~[[the]]~~ said body fluid is peripheral blood mixed with an anticoagulant substance and diluted with a diluting medium.

Claim 46. (currently amended) The method ~~as claimed in~~ of claim 44, wherein ~~[[the]]~~ said peripheral blood is venous or arterial blood.

Claim 47. (currently amended) The method ~~as claimed in~~ of 36, wherein ~~[[the]]~~ said body fluid is selected from the group consisting of lymph, urine, exudates, transudates, spinal fluid, seminal fluid, saliva, fluids from natural or unnatural body cavities, bone marrow, and dispersed body tissue.

Claim 48. (currently amended) The method ~~as claimed in~~ of claim 36, further comprising cooling a lower portion of ~~[[the]]~~ said centrifugation vessel after said centrifuging and before removing an interphase enriched in tumor cells.

Claim 49. (canceled) The method as claimed in claim 36, wherein the centrifugation vessel is divided into an upper compartment and a lower compartment, and wherein the cell separation medium is introduced into the lower compartment, and the body fluid is introduced in the upper compartment.

Claim 50. (canceled) The method as claimed in claim 49, wherein the upper and lower compartments are divided by a porous barrier, a filter, a sieve or a flap.

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Claim 51. (currently amended) The method ~~as claimed in~~ of claim ~~[[50]]~~ 36, wherein ~~[[the]]~~ said porous barrier, ~~[[the]]~~ filter, ~~[[the]]~~ sieve, or ~~[[the]]~~ flap have a thickness of 0.5-10 mm.

Claim 52. (currently amended) The method ~~as claimed in~~ of claim ~~[[50]]~~ 36, wherein ~~[[the]]~~ said porous barrier, ~~[[the]]~~ filter, ~~[[the]]~~ sieve, or ~~[[the]]~~ flap have a thickness of 1-5 mm.

Claim 53. (currently amended) The method ~~as claimed in~~ of claim ~~[[50]]~~ 36, wherein ~~[[the]]~~ said porous barrier, ~~[[the]]~~ filter, or ~~[[the]]~~ sieve have a pore size of 20-100 μm .

Claim 54. (currently amended) The method ~~as claimed in~~ of claim ~~[[50]]~~ 36, wherein ~~[[the]]~~ said porous barrier, ~~[[the]]~~ filter, or ~~[[the]]~~ sieve have a pore size of 20-30 μm .

Claim 55. (currently amended) The method ~~as claimed in any~~ of claim ~~[[50]]~~ 36, wherein ~~[[the]]~~ said porous barrier, ~~[[the]]~~ filter, ~~[[the]]~~ sieve, or ~~[[the]]~~ flap comprise[s] a hydrophobic material or are coated with a hydrophobic material.

Claim 56. (currently amended) The method ~~as claimed in~~ of claim 36, wherein ~~[[the]]~~ said cell separation medium comprises a dye, wherein said dye allows ~~[[the]]~~ said cell separation medium to distinguish from ~~[[the]]~~ said overlying body fluid by color, and allows localization of an interphase enriched in tumor cells.

Claim 57. (currently amended) The method ~~as claimed in~~ of claim 36, wherein ~~[[the]]~~ said body fluid comprises non-tumor cells having telomerase activity and telomerase-positive tumor cells, and wherein said method further comprises forming an interphase enriched in ~~the non-tumor cells having telomerase activity and the said~~ telomerase-positive tumor cells and depleted from ~~said telomerase-positive~~ non-tumor cells having telomerase activity.

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Claim 58. (currently amended) The method ~~as claimed in~~ of claim 36, wherein ~~[[the]]~~ said body fluid comprises tumor cells and blood stem cells, and wherein said method further comprises ~~a first step wherein~~

(a) forming an interphase ~~is formed~~ enriched in ~~[[the]]~~ said tumor cells and ~~[[the]]~~ said blood stem cells, and ~~a second step wherein~~

(b) enriching or depleting ~~[[the]]~~ said blood stem cells or ~~[[the]]~~ said tumor cells ~~are either enriched or depleted.~~

Claim 59. (currently amended) The method ~~as claimed in~~ of claim 58, wherein ~~[[the]]~~ said cell separation medium has a density in the range of from 1.061 to 1.065 g/ml.

Claim 60. (currently amended) The method ~~as claimed in~~ of claim 58, wherein ~~[[the]]~~ said cell separation medium has a density of about 1.062 g/ml.

Claim 61. (currently amended) The method ~~as claimed in~~ of claim 58, further comprising separating ~~[[the]]~~ said tumor cells from ~~[[the]]~~ said blood stem cells.

Claim 62. (currently amended) The method ~~as claimed in~~ of claim 58, further comprising separating ~~[[the]]~~ said tumor cells from ~~[[the]]~~ said blood stem cells by immunoadsorption.

Claim 63. (currently amended) The method ~~as claimed in~~ of claim 58, wherein said body fluid is selected from the group consisting of bone marrow and peripheral blood.

Claim 64. (currently amended) A kit for the separation of tumor cells from a body fluid, comprising a cell separation medium which has a density in the range of from 1.055 to 1.065 g/ml.

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Claim 65. (currently amended) The kit ~~as claimed in~~ of claim 64, further comprising a centrifugation vessel.

Claim 66. (currently amended) The kit ~~as claimed in~~ of claim 64, wherein ~~[[the]]~~ said cell separation medium has a density in the range of from 1.059 to 1.061 g/ml.

Claim 67. (currently amended) The kit ~~as claimed in~~ of claim 64, wherein ~~[[the]]~~ said cell separation medium has a density of about 1.060 g/ml.

Claim 68. (currently amended) The kit ~~as claimed in~~ of claim 64, wherein ~~[[the]]~~ said cell separation medium has a density in the range of from 1.061 to 1.065 g/ml.

Claim 69. (currently amended) The kit ~~as claimed in~~ of claim 64, wherein ~~[[the]]~~ said cell separation medium has a density of about 1.062 g/ml.

Claim 70. (currently amended) The kit ~~as claimed in~~ of claim 64, further comprising a centrifugation vessel wherein ~~[[the]]~~ said centrifugation vessel is divided into an upper compartment and a lower compartment.

Claim 71. (currently amended) The kit ~~as claimed in~~ of claim 70, wherein ~~[[the]]~~ said upper and lower compartments are divided by a porous barrier, a filter, a sieve, or a flap.

Claim 72. (currently amended) The kit ~~as claimed in~~ of claim 71, wherein ~~[[the]]~~ said porous barrier, ~~[[the]]~~ filter, ~~[[the]]~~ sieve, or ~~[[the]]~~ flap ~~[[has]]~~ have a thickness of 0.5-10 mm.

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Claim 73. (currently amended) The kit ~~as claimed in~~ of claim 71, wherein ~~[[the]]~~ said porous barrier, ~~[[the]]~~ filter, ~~[[the]]~~ sieve, or ~~[[the]]~~ flap ~~[[has]]~~ have a thickness of about 1-5 mm.

Claim 74. (currently amended) The kit ~~as claimed in~~ of claim 71, wherein ~~[[the]]~~ said porous barrier, ~~[[the]]~~ filter, or ~~[[the]]~~ sieve have a pore size of 20-100 μ m.

Claim 75. (currently amended) The kit ~~as claimed in~~ of claim 71, wherein ~~[[the]]~~ said porous barrier, ~~[[the]]~~ filter, or ~~[[the]]~~ sieve have a pore size of 20-30 μ m.

Claim 76. (currently amended) The kit ~~as claimed in~~ of claim 64, further comprising a centrifugation vessel wherein ~~[[the]]~~ said cell separation medium is present in ~~[[a]]~~ said lower compartment of ~~[[the]]~~ said centrifugation vessel, and wherein said body fluid is present in said upper compartment.

Claim 77. (previously presented) A centrifugation vessel comprising an upper and lower compartment, wherein the upper and lower compartments are divided by a flap.

Claim 78. (previously presented) A centrifugation vessel as claimed in claim 77, wherein the flap is closed in the state when the centrifugation vessel is at rest and is opened during centrifugation.

Claim 79. (previously presented) A centrifugation vessel as claimed in claim 78, wherein the flap is open by centrifugal force during centrifugation.

Claim 80. (previously presented) The centrifugation vessel as claimed 77, wherein the flap has a higher density than a separation medium introduced into the lower compartment.

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- Claim 81. (previously presented) The centrifugation vessel as claimed 77, wherein the flap has a thickness of 0.5-10 mm.
- Claim 82. (previously presented) The centrifugation vessel as claimed 77, wherein the flap has a thickness of 1-5 mm.
- Claim 83. (previously presented) The centrifugation vessel as claimed in claim 77, wherein the flap is rigidly connected to the centrifugation vessel.
- Claim 84. (previously presented) The centrifugation vessel as claimed in claim 77, wherein the flap forms a base of the upper compartment.
- Claim 85. (previously presented) The centrifugation vessel as claimed in claim 77, wherein the vessel comprises an insert wherein the flap forms the base of the insert.
- Claim 86. (currently amended) The centrifugation vessel ~~as claimed in~~ of claim 77, wherein ~~[[the]]~~ said vessel flap comprises an outer edge and ~~[[the]]~~ said flap opens into ~~[[the]]~~ said lower compartment ~~and opens~~ from the outer edge.
- Claim 87. (currently amended) A tumor cell culture obtained by ~~[[a]]~~ the method ~~as claimed in~~ of claim ~~[[1]]~~ 36.